

**HALF YEARLY COMPLIANCE REPORT TO THE CONDITIONS OF THE ENVIRONMENTAL CLEARANCE
(FOR Integrated plant- 0.85 MTPA)**

EC Letter No. F. No. J-11011/112/2013-IA-II(I), Dated: 17th October, 2022

THE PERIOD APR'2025 – SEPT'2025

M/S ARDENT STEEL LIMITED

Vill: Phuljhar, Block: Banspal, Dist: Keonjhar, Odisha – 758085



Ardent steel limited

Vill: Phuljhar, Block: Banspal, Dist: Keonjhar, Odisha.

COMPLIANCE FOR ENVIRONMENTAL CLEARANCE OF THE IRON ORE PELLETISATION PLANT OF

M/S ARDENT STEEL LIMITED

Vill: Phuljhar, Block: Banspal, Dist: Keonjhar, Odisha – 758085

A. SPECIFIC CONDITION

SL NO	CONDITION	COMPLIANCE
i.	The project proponent shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.	We are complying the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. The recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented respectively.
ii.	The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF & CC in this regard.	Report on GHG emissions inventory for the plant and the Programme for reduction of the same including carbon sequestration including plantation is enclosed as <u>Annexure – 1</u>
iii.	Land acquisition shall be completed prior to commencement of project activities.	Agreed
iv.	01 Nos. artificial ponds (rain water harvesting pond) exists in the project site. Rivers and nallahs exists within the study area from the project site. The water bodies shall not be disturbed. Mitigation measures as committed w.r.t. safeguarding the water bodies shall be implemented.	Agreed. safeguarding the water bodies shall be implemented if required.
v	As committed vide undertaking dated 15.07.2022 for adoption of 7 villages namely Bhuyansahi, Fuljhar, Rugudisahi, Rangamatia, Andharikhaman, Chhatana & Balabhadrapur, PP shall formulate Village Adoption program consisting of need-based community development activities, in consultation with the district administration and the village panchayats and implement the same to develop them into model villages.	We are developing Vill- Phuljhar along with all periphery village by providing drinking water, facilities village education, running of ambulance, refurbishment of hospital, repairing and maintenance of road, electrification,

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vi	Project Proponent shall strictly comply with the conditions observed by the IRO in the CCR and compliance status in this regard, shall be submitted to concerned Integrated Regional Office of the MoEF &CC. PP shall install CAAMQS by 31.12.2022 as committed.	Agreed and also 4 nos CAAQMS has been installed as per condition observed by the IRO. Photocopy of the same enclosed as Annexure- 2 .
vii	Tailings from Iron Ore washing plant shall be dewatered in filter press and no slime /Tailing pond shall be permitted.	Agreed,
viii	Solid waste utilization a. PP shall install a slag crusher to convert steel slag into aggregate for use in construction industry, fine sand for use as flux in steel plant, sand in brick making and as lime in cement making. b PP shall recycle/reuse 100 % solid waste generated in the plant. c Used refractories shall be recycled as far as possible.	Pellet plants do not generate slag. however, waste material generated from the process is being reused in the same plant.
ix	Sinter Plant shall be equipped with Sinter cooler waste recovery system and suitable technology for control of dioxins and furans emissions from the plant.	We are not commissioning sinter plant in our project.
x	Tar shall be recovered from producer gas and shall be sold to registered processors and phenolic water shall be incinerated in After Burn Chamber (ABC) of DRI kilns.	Producer gas plant is non-operation since last 4 years. Thus, we don't have tar generation.
xi	Blast Furnaces shall be equipped with Top Recovery Turbine (capacity more than 450m3), dry gas cleaning plant, stove waste heat recovery, cast house and stock house ventilation system and slag granulation facility.	During installation of blast furnaces, we will comply this condition.
xii	Secondary fume extraction system shall be installed on converters of Steel Melting Shop.	During installation of Steel Melting Shop, we will comply this condition.
xiii	Submerged Arc/Electric Arc Furnace shall be closed type with 4th hole extraction system.	During installation of Arc/Electric Arc Furnace we will comply this condition.

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xiv	85-90 % of billets shall be rolled directly in hot stage. RHF shall operate using only Light Diesel Oil or Mixed BF/CO gas/Producer gas.	During Re Heat Furnace (RHF) operation we will comply this condition.
xv	Dust emission from Steel Plant stacks shall be up to 30 mg/Nm ³ .	Agreed
xvi	The water requirement for the proposed project is estimated as 12,830 m ³ /day which will be obtained from Baitarani River after obtaining necessary permission. No GW abstraction is permitted.	Agreed
xvii	Three tier Green Belt shall be developed in a time frame of one year with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF & CC.	Yes agreed, we have been saplings following type of species inside our factory premises such as Neem/Maha Limba, Sirisa, Sisu, Jamun, Karanja, Arjun, Amla, Kusum, Harida, Patuli, Baula, Jeutha, Krushna Chuda, Mango, Ashok and procured 500 saplings from Hitech Nursery, Keonjhar
xviii	Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.	Greening and Paving has been provided in existing plant to arrest soil erosion and dust pollution from exposed soil surface.
xix	Project Proponent shall explore the possibility to minimise the felling of trees to bare minimum in their project site.	Agree and care shall be taken.
xx	Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF & CC.	Performance test of CEMS and CAAQMS is green Practice, annual report shall be submitted.
Xxi	Rain water harvesting shall be implemented to recharge/harvest water as per the action plan submitted in the EIA/EMP report.	Rain Water Harvesting in our plant is practiced.
xxii	PP shall make arrangements for impervious sheets to avoid pollution and to construct shed for iron ore fines on or before 31st March 2023 as committed.	Iron ore fines are being covered by water proof Tarpaulin.

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xxiii	The proposed project shall be designed as "Zero Liquid Discharge" Plant. No waste waters will be discharged outside the plant boundary.	We are adhering ZLD concept in our plant, reusing entire water in our process itself after series of settling tank and effluent treatment plant.
xxiv	Air cooled condensers shall be used in the power plant.	During installation of Power plant, we will comply this condition
xxv	The Unit is existing and using coal and coke. Therefore, the industry is recommended to measure silica and coal dust exposures using personal and area air samplers in process plants and to be compared with Permissible exposure limits as per Indian Factories Act,1948. Report to be submitted to the IRO, MoEF & CC.	Noted, shall complied.
xxvi	A proper action plan must be implemented to dispose of the electronic waste generated	Noted, shall complied
xxvii	The recommendations of the approved Site-Specific Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF & CC.	Approved Site-Specific Wildlife Management Plan is enclosed as Annexure- 3
xxviii	All the commitments made to the public during the Public Hearing/Public Consultation shall be satisfactorily implemented. The action plan based on the social impact assessment study of the project as per the EMP in accordance to the Ministry's OM dated 30.09.2020 shall be strictly implemented and progress shall be submitted to the Regional Office of MoEF & CC.	Employment to the local people - in the existing plant above 75% of local and district people have given the employment opportunity in respect of their qualification and experience. Medical Facilities – 2 nos of ambulance have been provided for day-to-day medical emergency of the villagers. We are supplying of drinking water to the villagers through pipe line and tankers in day-to-day basis. Education- We have provided 2 no of teachers in local school. we are providing IT knowledge / skill to villagers.

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xxix	<p>The Plastic Waste Management Rules 2016, inter-alia, mandated banning of identified Single Use Plastic (SUP) items with effect from 01/07/2022. In this regard, CPCB has issued a direction to all the State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) on 30/06/2022 to ensure the compliance of Notification published by Ministry on 12/08/2021. The technical guidelines issued by the CPCB in this regard is available at https://cpcb.nic.in/technical-guidelines-3/ All the project proponents are hereby requested to sensitize and create awareness among people working within the Project area as well as its surrounding area on the ban of SUP in order to ensure the compliance of Notification published by this Ministry on 12/08/2021. A report, along with photographs, on the measures taken shall also be included in the six-monthly compliance report being submitted by the project proponents.</p>	Agreed
xxx	<p>The project proponent shall adopt the Clean Air practices like mechanical collectors, wet scrubbers, fabric filters (bag houses), electrostatic precipitators, combustion systems (thermal oxidizers), condensers, absorbers, adsorbers, and biological degradation. Controlling emissions related to transportation shall include emission controls on vehicles as well as use of cleaner fuels. Sufficient numbers of additional truck mounted Fog/Mist water cannons shall be procured and operated regularly inside the project premises and also in the surrounding villages to arrest suspended dust in the atmosphere.</p>	<p>We have adopted the Clean Air practices like mechanical collectors, fabric filters (bag houses), electrostatic precipitators, combustion systems (thermal oxidizers), absorbers and biological degradation. Controlling emissions related to transportation includes emission controls on vehicles as well as use of cleaner fuels.</p>

B. GENERAL CONDITIONS

SL NO	CONDITION	COMPLIANCE
I	STATUTORY COMPLIANCE	
I	The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals / consent/ permissions etc., required to be obtained or standards /conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.	Agreed
II	AIR QUALITY MONITORING AND PRESERVATION:	
I	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as 04 Nos. Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Complied.
ii	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Last six-month summary report fugitive monitoring report are enclosed as Annexure -4 .
iii	Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.	Sampling facility at process stacks has been provided as per CPCB guidelines for manual monitoring of emissions.

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iv	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.	Bag filters are installed at 6 locations in the plant to control fugitive emission. Apart from this, ESP is connected with Travelling Grate. 60 numbers of water sprinklers have been installed within the plant premises
v	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	At present we are detecting the leakage by maintaining Differential Pressure. However, we are in the process to discuss with technology supplier.
vi	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.	60 nos. of Water Sprinklers have been installed along with road as well as loading and unloading points, all roads. Mobile water tanker has been engaged to sprinkle water on road. Truck mounted sweeper machine is engaged to clean dust. Truck Mounted unit with dual vacuum cleaner is provided. the suction system comprising of one center brush, two side brushes and two suction heads; one operating at a time having a container volume of 6.5 cum.
vii	Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.	All fines such as iron ore fines, coal fines, lime fines are being reused in the process after collection.
viii	The project proponent uses leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.	Leak proof trucks/dumpers has been provided to carry coal and other raw materials and cover them with tarpaulin.
ix	Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility).	Truck mounted vacuum cleaner has been provided to collect and reuse the spillage materials.

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X	Land-based APC system shall be installed to control coke pushing emissions.	Flux grinding units convey the coal powder through pneumatic conveying close circuit which is Land-based APC system.
Xi	Monitor CO, HC and O ₂ in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber	We shall comply after the installation.
Xii	Vapor absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.	Not applicable.
Xiii	Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.	Cover shed has been provided for raw material like Coal, Dolomite and Limestone etc. iron ore fines has been covered by waterproof Tarpaulin
Xiv	Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.	Complied.
III	WATER QUALITY MONITORING AND PRESERVATION:	
I	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	This condition is not applicable to us as we are running our plant with ZLD concept. we are reusing entire water in our process itself.

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li	The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.	Complied. Ground water monitoring data of last six-month period is attached in Annexure -5
lii	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.	A full fledged Sewage Treatment Plant has been provided for treatment of domestic waste water
iv	Garland drains and collection pits shall be provided for each stock pile to arrest the runoff in the event of heavy rains and to check the water pollution due to surface run off.	Garland drains and collection pits has been provided to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
v	Tyre washing facilities shall be provided at the entrance of the plant gates.	Agreed and also Wheel Washing System has been installed as per condition observed by the IRO. Photocopy of the same enclosed as Annexure-6 .
vi	Water meters shall be provided at the inlet to all unit processes in the steel plants.	Water meters has provided at intake of ground water
IV	NOISE MONITORING AND PREVENTION:	
I	Noise pollution shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.	The noise level monitoring result during this six-month period is within the standards stipulated by CPCB. Attached in Annexure – 7 .
V	ENERGY CONSERVATION MEASURES:	
i	Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.	During operation of ladles, we will comply this condition if applicable.
ii	Restrict Gas flaring to < 1%.	During operation we will comply this condition if applicable.

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iii	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;	Provide solar power generation on roof tops of buildings, for solar light system for all common areas has been provided
iv	Provide LED lights in their offices and residential areas	Provided.
v	Ensure installation of regenerative/recuperative type burners on all reheating furnaces.	During installation of reheating furnaces, we will comply this condition if applicable
VI	WASTE MANAGEMENT:	
i	Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.	During installation of the project, we will comply this condition if applicable
II	Kitchen waste shall be composted or converted to biogas for further use.	Kitchen Waste converted to compost.
VII	GREEN BELT:	
i	Green belt shall be developed in an area equal to 33% of the plant area with native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant	Yes, already covered 33% of the plant area.
ii	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the program for reduction of the same including carbon sequestration by trees in the plant premises.	Report on GHG emissions inventory for the plant and the programme for reduction of the same including carbon sequestration including plantation is enclosed as Annexure – 1
iii	Project proponent shall submit a study report on Decarbonization program, which would essentially consist of company's carbon emissions, carbon budgeting/balancing, carbon sequestration activities and carbon offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/assessments should be measurable and monitorable with defined time frames.	Report on GHG emissions inventory for the plant and the programme for reduction of the same including carbon sequestration including plantation is enclosed as Annexure – 1

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VIII	PUBLIC HEARING AND HUMAN HEALTH ISSUES	
I	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	We have approved On Site Emergency Plan for the existing plant from Factories and Boilers Department
li	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms.	We have carried out the heat stress analysis for the workmen. Operators those who are working in such area are provided Personal Protection Equipment (PPE) as per the norms of Factory Act
lii	Occupational health surveillance of the workers shall be done on a regular basis and records maintained.	Agreed.OccupationalHealth Surveillance of the workers has been conducted in regular basis. Photo copy of health checkup reports are attached as <u>Annexure – 8.</u>
IX	ENVIROMENTAL MANAGEMENT	
I	The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020.	Agreed. We have a details plan / budget for Corporate Environment Responsibility
li	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements /deviation / violation of the environmental / forest / wildlife norms /conditions. The company shall have defined system of reporting infringements /deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	Yes, we have a well laid down environmental policy, which is given in detail in the EIA /EMP report.
lii	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.	Separate Environment Cell has been developed with qualified personnel under the control of senior Executive, who is reporting directly to the head of the organization.

X	MISCELLONEOUS	
SL NO	CONDITION	COMPLIANCE
i	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	Yes, it has already been intimated to public and also submitted a copy to the State Pollution Control Board, Odisha. The news of obtaining EC was published in two local newspapers.
ii	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	Complied.
iii	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	Complied. The compliance report, monitoring report, CSR Activities are being uploaded on company's website (ardentsteel.com) regularly.
iv	The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.	Complied as annexure 2
v	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.	Complied. The six-monthly EC compliance report is being submitted regularly.

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vi	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	The environmental statement for each financial year is submitted every year to SPCB, Odisha. The copy of the environmental statement for the year 2024-25 is attached as Annexure –9 .
vii	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.	The project has been completed before obtaining the EC. Financial Closure: 21 .10.2008 Financial approval: 21.10.2008 Purchase of 1st land: 31.05.2008 Proof for the above already submitted earlier.
viii	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	Agreed. In a phase wise manner as per CER, we will implement them.
ix	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	Agreed, our future expansion will only be carried out after prior approval of MoEF & CC.
x	The PP shall put all the environment related expenditure, expenditure related to Action Plan on the PH issues, and other commitments made in the EIA/EMP Report etc. in the company web site for the information to public/public domain. The PP shall also put the information on the left-over funds allocated to EMP and PH as committed in the earlier ECs and shall be carried out and spent in next three years, in the company web site for the information to public/public domain.	All the environment related expenditure, expenditure related to Action Plan on the PH issues, and other commitments made in the EIA/EMP Report etc. are available in company web site for the information to public.
xi	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.	Agreed. All cooperation shall be extended to the officer(s) of the Regional Office during any visit in future.